

MATTERS ARISING

Granuloma annulare of the penis

In the February, 1992 issue of *Genitourinary Medicine* Hillman *et al.*¹ described one case of granuloma annulare (GA) affecting the shaft of the penis. The authors stress the great rarity of this dermatological condition involving the penis and could find only one other example after a careful search of the literature. As a practising dermatologist for some 15 years, I recognised GA in half a dozen or so patients; all were female, their ages varying between 18 and 40 years. In every one of these, the lesion occurred on the dorsum of hand or finger. As a venereologist I saw only one case of genital GA about 25 years ago whilst practising in the Wessex region. The patient was a male aged about 50 years who presented with a single, typical GA lesion on the shaft of his penis. It had been present for over six months and he had attended the VD clinic of a teaching hospital in London without the true diagnosis being made. As in the case studied so fully by Hillman *et al.*, this man was also free from venereal disease.

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- 1 Hillman RJ, Waldron S, Walker MM, Harris JRW. Granuloma annulare of the penis. *Genitourin Med* 1992;68:47-9.

World-wide distribution of high level tetracycline-resistant *Neisseria gonorrhoeae*.

We read with interest the paper of Van Dyck *et al.*¹ reporting tetracycline-resistant *Neisseria gonorrhoeae* (TRNG) in Zaire. TRNGs have also been reported from The Netherlands,^{2,3} France,⁴ Spain,⁵ and Canada⁶ following the original isolation of TRNG in the USA.⁷ We have had a long standing interest in high level TRNG having been the first group to isolate and report TRNGs in the UK in June 1987.⁸ This predated the report of Ison *et al.* in the *Lancet*⁹ by at least 6 months.

Previous work has also shown that the resistance gene which is of the TetM class can be found on one of two conjugative plasmids, the American type and the Dutch type, so called because of the country of origin of the strains in which they were first observed.¹⁰ We have extended this work to examine isolates acquired in Africa, Asia, Europe and South America.

In the United Kingdom we have observed the importation of tetracycline resistant *N gonorrhoeae* (TRNG) from various parts of the globe and have been able to look at these isolates at a molecular level. The table shows a summary of the regions from which we have either obtained isolates or where the original infection was acquired. The table

also includes their plasmid types (either Dutch or American). The plasmid type was determined as described elsewhere¹⁰ using restriction endonuclease digestion of the plasmid DNA with the enzyme *Bgl* I which easily differentiates the two plasmid types.

The strains which originated in Africa appear to be divided into two groups. Isolates originating from the Cameroon and Gabon on the west coast of Africa have resistance plasmids of the Dutch type, whereas isolates from the rest of the African countries which span central and eastern Africa together with the Seychelles Islands possess the American type. A comparison of the Southern blot hybridisation data of Van Dyck *et al.* with that produced by ourselves^{10,11} suggests that the plasmid studied from Kinshasa (Zaire) was of the American and not the Dutch type. This extends the observations that the TRNGs we have examined, acquired from Central Africa, were of the American type. All of the Asian strains examined carried the Dutch type of plasmid as did the strains isolated from patients whose infections were acquired in the South American countries of Brazil and Columbia. There does not appear to be a clear pattern of plasmid types among TRNG found in the European countries. Strains from the Netherlands appear to be predominantly of the Dutch type, one strain from Portugal has the American plasmid and the United Kingdom appears to have both types of plasmid although most isolates acquired in this country carry the American type of plasmid. The West Indies and Jamaica have predominantly American type TRNGs. We have been unable to acquire any recent strains originating in the United States and so we have not been able to include any recent American isolates in this study.

The plasmids encoding high level tetracycline resistance appear to follow closely the epidemiology of the penicillinase-producing *N gonorrhoeae* (PPNG). As with the PPNG there appears to be two plasmid types which appeared independently at approximately the same time. Each plasmid type became established in its own geographical region. We have seen this with the TRNGs although limited numbers of TRNG have been obtained from the different countries. This is probably due to poor surveillance of gonococcal isolates for tetracycline resistance. The presence of TRNG in different countries can only be recognised if there is active screening in laboratories for them and the only method of quantifying the spread of these organisms is for reference laboratories to accumulate data on these strains. Many of the isolates which

we have received were referred because they were resistant to penicillin and not because of tetracycline resistance. The limited numbers of isolates obtained for this study are insufficient for meaningful statistical analysis but indicate the occurrence of an interesting distribution of the different plasmid types in the world.

Many of these isolates have been brought to the United Kingdom by travellers, including those from the business community and tourists. The occurrence of TRNG in these countries may only be indicated by their presence in the communities which come into contact with those travellers. However, these communities can also act as a source of TRNG for those countries as a whole. The importation of TRNG into the United Kingdom has led to the occurrence here of both of the two plasmid types. This may well be an indication that sexually active Europeans travel widely and in consequence sample different bacterial populations. In our study, TRNG/PPNG strains from Asia and West Africa appear to have Asian type β -lactamase-encoding plasmids and strains from Europe, North and South America, Central and West Africa (except one strain from Kenya) have the African type β -lactamase-encoding plasmid. The presence of the African or Asian plasmid does not seem to affect the type of tetracycline resistance plasmid present and this reinforces the reported conjugative spread of the plasmid conferring tetracycline resistance.

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- 1 Van Dyck E, Rossau R, Duhamel M, *et al.* Antimicrobial susceptibility of *Neisseria gonorrhoeae* in Zaire: high level plasmid-mediated tetracycline resistance in Central Africa. *Genitourin Med* 1992;68:111-6.
- 2 Roberts MC, Wagenvoort JHT, Van Klingeren B, Knapp JS. TetM and β -Lactamase—containing *Neisseria gonorrhoeae* (Tetracycline resistant and penicillinase producing) in the Netherlands. *Antimicrob Agents, Chemother* 1988;32:158.
- 3 Van Klingeren B, Dessens-Kroon M, Verheuvell M. Increased tetracycline resistance in gonococci in the Netherlands. *Lancet* 1989;ii: 1278.

The distribution of tetracycline-resistant *Neisseria gonorrhoea* around the world and the associated plasmid types

Geographical area	Country	Number of strains	Plasmid type	PPNG strains
Africa	Cameroon	1	Dutch	1
	Gabon	1	Dutch	1
	Kenya	4	American	4
	Seychelles	1	American	1
	Zaire	1	American	1
Asia	Indonesia	2	Dutch	2
	Singapore	2	Dutch	2
	South East Asia	1	Dutch	0
	Netherlands	12	Dutch	7
Europe	Portugal	1	American	1
	United Kingdom	2	Dutch	2
	United Kingdom	11	American	4
	Jamaica	3	Dutch	3
North America	Jamaica	12	American	10
	United States	2	American	0
	West Indies	1	American	1
	Brazil	1	Dutch	1
South America	Columbia	2	Dutch	1

- 4 Casin I, Perene F, Isoire C, *et al.* High-level tetracycline resistance in penicillinase—producing *Neisseria gonorrhoea* in France. *Euro J Clin Microbiol, Infect Dis* 1989;8:929–31.
- 5 Vazquez JA, Berron S, Menendez B. Isolate of TetM—Containing *Neisseria gonorrhoeae* (TRNG) in Spain. *Genitourin Med* 1990;66:303–4.
- 6 Dillon JA, Carballo M. Molecular epidemiology and novel combinations of auxotype, serovar, and plasmid content in tetracycline resistant *Neisseria gonorrhoeae* isolated in Canada. *Can J Microbiol* 1990;36:64–7.
- 7 Centers for Disease Control. Tetracycline-resistant *Neisseria gonorrhoeae*—Georgia, Pennsylvania, New Hampshire. *MMWR* 1985;34:563–70.
- 8 Waugh MA, Lacey CJN, Hawkey PM, *et al.* Spread of *Neisseria gonorrhoeae* resistant to tetracycline outside the United States of America. *BMJ* 1988;296:898.
- 9 Ison CA, Terry P, Bindyana K, *et al.* Tetracycline resistant gonococci in UK. *Lancet* 1988; i:651–2.
- 10 Gascoyne DM, Heritage J, Hawkey PM, *et al.* Molecular evolution of tetracycline resistance plasmids carrying TetM found in *Neisseria gonorrhoeae* from different countries. *J Antimicrob Chemother* 1991;28:173–83.
- 11 Gascoyne DM, Heritage J, Hawkey PM. The 25.2 MDa tetracycline-resistance plasmid is not derived from the 24.5 MDa conjugative plasmid of *Neisseria gonorrhoeae*. *J Antimicrob Chemother* 1990;25:39–47.

NOTICES

Northern Genitourinary Physicians Colposcopy Group

Third Annual Colposcopy and Practical Treatment Course

This will be held 9–11 October 1992. Fee (including accommodation, all teaching events, and banquet) £375. Reduced fee for accompanying persons. Details obtainable from Dr Alawattagama, Dept of Genito-Urinary Medicine, Royal Liverpool Hospital, Prescott St, Liverpool L7 8XP.

The Royal Society of Health. "How Safe are the Medicines You Take?"

A conference will be held at the Royal Hotel, York, on 19 November 1992. Details of the programme and fees are obtainable from:

Conference Department, The Royal Society of Health, 38a St George's Drive, London SW1V 4BH. Telephone 071-630 0121, Fax 071-976 6847.

The Third Asian Dermatological Congress

This will be held 15–17 January 1993 in Hong Kong. Information is available from: Dinah Hoey, Institute for International Research, 1804-5 Seaview Commercial Building, 21–24 Connaught Road West, Hong Kong. Tel: 5495618, Fax: 5592461.

8th IUVDT Regional Conference (Asia and Pacific Branch)

will be held 27–30 October 1993 at Chang Mai, Thailand.

The theme of the conference will be "STD in the AIDS era".

Details may be obtained from Dr A Chitwarakorn, The TSM-STD, 189 VD Division, South Sathorn Road, Bangkok 10120, Thailand.